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AUTHOR	Heck, Edward J.; And Others
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ABSTRACT

This 1992 survey of alcohol use of university students conducted at the University of Kansas used identical sampling procedures and contained many of the same items as a previous survey conducted in 1988. A total of 493 questionnaires were returned. A total of 49 students or 9.9% claimed to not have had an alcoholic beverage or to have had one only once or twice in their life. Over 57% of students who reported using alcohol reported high school as the period of their onset of regular use of alcoholic beverages. Over 50% reported drinking less than once a week. Over 11% reported drinking seven or more drinks per occasion of typical drinking. In frequencies and percentages of consumption, 51.4% were categorized as light drinkers, 37.4% as moderate drinkers, and 11.3% as heavy drinkers. The two most mentioned negative effects of drinking were arguments with boy/girlfriend and indiscriminate sexual activity. Items from the CAGE screening test for alcoholism were used with feeling the need to cut down reported by 31.1% of the students. Students appeared to be acting more responsibly by drinking less than they did 4 years previous. Because of the inability of the CAGE to identify problem drinking, there is a strong need to develop a screen device for problem drinking to be used in college counseling offices. (ABL)

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A STUDY REEXAMINING ALCOHOL USE AMONG UNIVERSITY OF KANSAS STUDENTS

Edward J. Heck , Mark J. Presnell, and Michael D. Williams
Department of Counseling Psychology
University of Kansas

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Edward J. Heck is Professor of Counseling Psychology at the University of Kansas. Michael D.Williams and Mark Presnell are doctoral students in counseling psychology at the University of Kansas. The authors can be contacted at the Department of Counseling Psychology, 116 Bailey Hall, University of Kansas, Lawrence, KS 66045. We gratefully acknowledge the financial support of the Division of Student Affairs for the 1988 study and The University of Kansas' Graduate Research Fund for support of the 1992 study.

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This report is a descriptive summary of the results of a second survey of alcohol use of university students conducted at the University of Kansas. This study used identical sampling procedures and contained many of the same items as a previous survey conducted in 1988. The survey data was obtained during the Spring semester of 1992 and was sponsored by the Graduate Research Fund of the University of Kansas.

Sample Characteristics. A random sample of 1000 students was drawn after the 20th day of classes in the Spring 1992 semester. A cover letter, survey form and return envelope was mailed to each student with a three week return date. A total of 493 questionnaires were returned representing a 49.3% return rate. No follow up efforts were made to increase the sample size. Excluded from the sample were non-degree seeking students and students at the medical center campus. The 1988 study yielded a slightly higher return rate of 58.2%. (Heck, 1989)

A total of 49 (9.9%) of the returned questionnaires were from students who claimed to not have ever had an alcoholic beverage or had one only once or twice in their life. Thus, approximately 90% of the students have either used alcohol at some time or are currently using alcohol. This is almost identical to the 1988 data of 10.3% nondrinkers. (Heck, 1989)

Table 1 contains various comparative demographic data on the sample and the composition of the 1992 total KU student body and was obtained from items 1-4 of the survey.

Table 1
Sample and Population Demographic Characteristics

Characteristics	Sample		Student Population	
	n	Percent	n	Percent
Freshmen	70	15.8	5241	23.4
Sophomore	79	17.8	3713	16.5
Juniors	84	18.9	4309	19.2
Seniors	83	18.7	3895	17.4
5th year senior	31	7.0	231	1.0
Grad./Law	97	21.8	5054	22.5

Table 1 (cont'd)

Characteristics	Sample		Student Population	
	n	Percent	n	Percent
Males	191	43.0	11144	49.7
Females	253	57.0	11299	50.3

It appears that the sample reasonably reflects the total student body with the exception of the freshman males who appear to be underrepresented in the 1992 data and the fifth year seniors are overrepresented. Males were underrepresented in the sample while females were overrepresented. There were no significant discrepancies in these sample proportions within the 1988 sample.These disproportions were examined for possible effects on the problem drinking rate since it has been shown in most previous research, as well as in the 1988 study, that males have higher rates on this variable. Chi-square analysis of proportions did not reveal any significant differences in this rate between males of both studies.

RESULTS

Item 5 asked students to indicate the period of time when they began to use alcoholic beverages on a regular basis. Table 2 contains the frequencies and percentages for the several time periods. The percentages are based on an N of 444 which is the number of students reporting use of alcohol.

Table 2
Onset of Regular Use of Alcoholic Beverages

Onset Period	Frequency	Percentage
Elementary School	3	.7
Junior High	45	10.1
High School	255	57.4

Table 2 (cont.)

	Frequency	Percentage
College Year		
Freshman	93	20.9
Sophomore	20	4.5
Junior	15	3.4
Senior	6	1.4
Graduate/Law	7	1.4

These figures are quite close to that found in the previous drug survey completed on KU students as the high school years is the time period when the majority of students start their use (Heck, Lichtenberg, & Bentley, 1988). If the high school and freshman years are combined, approximately 78% of the people who use alcohol begin their use in those time periods.

Item 6 asked students to indicate how often they drank alcoholic beverages. Table 3 contains the frequency of use figures.

Table 3
Frequency of Use

Frequency Category	Frequency	Percent
Less than once a week	244	54.9
Once or twice a week	150	33.8
More than twice a week	50	11.3

Item 7 asked students to indicate how many drinks do they typically have when they do drink. Table 4 contains the figures on the usual number of drinks per occasion.

Table 4
Number of Drinks per Occasion

No. of drinks per occasion	N	Percent
1-2	149	33.6
3-4	157	35.3
5-6	90	20.3
7+	48	10.8

To examine "consumption" patterns the survey was constructed, following the suggestion of Higgenbottom, Bissonette, and O'Shea (1987), using two items (i.e. item 6 & 7) measuring the frequency and quantity of drinking. The data on these two items are cross-tabulated to form six Quantity-Frequency Categories (QFC). Six QFC categories were established as follows:

1. QFC 2- **Occasional Drinker** (1-2 drinks less than once/week)

2. QFC 3- **Light Drinker** (3-4 drinks less than once/week or 1-2 drinks 1-2 times/week)

3. QFC 4- **Light-Moderate** (5-6 drinks less than once/week, 3-4 drinks 1-2 times/week, or 1-2 drinks more than twice/week)

4. QFC 5- **Moderate** (7+ drinks less than once/week, 5-6 drinks 1-2 times/week, or 3-4 drinks more than twice/week)

5. QFC 6- **Moderately Heavy** (7+ drinks 1-2 times/week or 5-6 drinks more than twice/week)

6. QFC 7- **Heavy Drinker** (7+ drinks more than twice/week)

For ease of analysis the 6 categories were collapsed into 3 by combining QFC 2&3, 4&6, and 6&7 resulting in light, moderate, and heavy consumption categories. Table 5 contains the frequencies and percentages of the sample in these three categories (total n=444).

Table 5

Frequencies and Percentages of Consumption (QFC) Category

Category	Frequency	Percent
QFC2+3 (light)	228	51.4
QFC4+5 (moderate)	166	37.4
QFC6+7 (heavy)	50	11.3

In the 1988 data, a greater percentage of heavy drinkers (19.3% overall) was observed. In the 1992 data, both light and moderate drinking appear to be slightly higher than the 1988 results. It was also reported in 1988 study that college males are heaver drinkers than college females. This finding is supported by the 1992 data by the fact that more males fall into the heavy drinking category than females.

Students were asked (item 9) if they had ever experienced certain negative effects as a result of drinking. Item 9 contained twelve negative effects with the first eight effects taken from Smith, Collins, Kreisberg, Volpicelli, and Alterman (1987). Particular attention was given to the last four items that comprise one of the screening tests for alcoholism known as the CAGE (Ewing, 1984; Kinney & Meilman, 1987; Mayfield, McLeod, & Hall, 1974). The CAGE items include: (1) feeling the need to cut down on your drinking, (2) becoming annoyed at criticism of your drinking, (3) feeling guilty about your drinking,and (4) needing a drink first thing in the morning to get up. It is to be noted that while the CAGE has been shown to have a higher sensitivity (i.e ability to identify problem drinkers) and specificity (i.e. ability to not mislabel normal drinkers as problem drinkers) than either of two other screening instruments (Trauma Score and Brief MAST) it still failed to identify 43% of problem drinkers and falsely labeled 15% of all normal drinkers as problem drinkers within a college student population (Smith, et al.,1987). While these researchers do not recommend the use of these instruments for screening purposes, CAGE items were included for potential research purposes. Table 7 contains the frequencies and percentages of students that drink who report the various negative effects surveyed in item 9.

Table 7

Frequencies and Percentages of Negative Effects

Effect	Frequency	Percent
Missed school	127	28.6
Blacking out	105	23.7
Arguments with close friends	98	22.1
Arguments with boy/girlfriend	141	31.8
Fights while intoxicated	56	12.6
Stealing/damaging property	78	17.6
Indiscriminate sexual activity	140	31.5
Physical Injuries	101	22.8
CAGE ITEMS		
Feeling need to cut down	138	31.1
Annoyed at criticism of drinking	47	10.6
Feeling guilty over drinking	79	17.8
Needing a drink first thing in the morning	2	0.5

It should be noted that while there is no agreed upon or validated reference standard for problem drinking there is general agreement that alcohol use becomes problematic when it results in injurious effects to the individual or to others (Smith et al., 1987). The first eight items sampled some of the more common negative effects of problem drinking. While there is no way of knowing the frequencies of any of these effects for any individual, it is apparent that a sizeable percentage of those who drink have experienced some negative effects.

The CAGE has a range of possible scores from 0-4 and the literature recommends a score of 2 or more as the threshold cut-off point in screening for alcoholism. An analysis was made of the CAGE data with the following results: 2 items checked (45 or 10.1%), 3 items checked (20 or 4.5%), and 4 items checked (1 or .2%). Approximately 137 students (30.9%) check more than 2 negative effects which was a decrease of about 3% from the 1992 data. Still, 307 students (69.1%) checked fewer than two negative effects. (Heck, 1989)

While the availability of non-alcoholic beverages at social gatherings seems to be the rule, only 5.2% of the students indicate (item 11) that they always choose non-alcoholic drinks. However, at the other end of the distribution, only 5.0% say that they never choose non-alcoholic drinks (27.2% said frequently, 42.3%- sometimes, 20.3%-rarely). In comparison to the 1988 data, students showed about a 7% increase in opting for non-alcoholic drinks at events where both forms of drinks are available.

In response to the question (item 14) of how often, in the past 12 months, would students estimate that they had driven a motor vehicle while under the influence of alcohol, 46.8% of the students responded never, 26.6% responded one to two times, 12.4% responded three to five times, 5.0% responded six to ten times, and 9.2% responded more than ten times. This means that a full 14% of students are driving under the influence six or more times a year.

DISCUSSION

At the time of writing this report the authors decided to essentially report only the basic, descriptive information pertaining to each of the survey items. Obviously there is considerable opportunity for further analysis such as various cross-tabs analyses. We suggest this be done, particularly for living groups, as that sample parameter seemed to be the most discrepant from the population data and that living arrangement may be significantly related to alcohol use patterns (Hickenbottom, et al.,1987).

The issue of "research comparability" is a very important issue and necessitates the use of common definitions and measures. It is not that uncommon to find discrepancies in different studies which, in part, are due to the differences in definitions and procedures. In the case of this study, certain items (i.e. items 6 and 7), concerned with the "quantity and frequency" issue, were modeled after the definitions of Hickenbottom et al. (1987). By combining or completing a cross-tabs analysis of those items a "Quantity-Frequency Continuum" (QFC) was derived which is used to create a six category classification scheme of alcohol use. It was important to use a common metric, such as the QFC index, so as to permit comparative research. While certain comparisons were made with this index, there are a number of further analyses that could be done.

The 10% nondrinking figure found in this study is within the range of figures reported in the National Institute of Drug Abuse sponsored study (Johnston et al., 1986). The NIDA study found that college students have above average annual prevalence of alcohol use compared to all high school graduates in their age cohort (92% vs. 89%). If the NIDA figures are used then about 8% of college students are non-users of alcohol which is a slightly lower percentage of non-users than was found in this sample.

The CAGE still shows predictive inefficiency in the 1992 sample. Specifically, the CAGE has difficult identifying problem drinking without incorrectly identifying normal drinkers and this conclusion appears to be especially true for females. However, if certain negative effects data (e.g. the eight negative effects excluding the CAGE items in Table 7) is crossed with QFC data, then a definition of problem drinking is created. In this case "problem drinkers" refers to those students falling in the QFC6+7 who also evidence 3-8 negative effects. In effect, these are students who are in the top two consumption and negative effects categories. Under this criteria there is an approximate 9% problem drinking rate in the student body as a whole. The problem drinking rate for males was 17% and 4% for females; both rates were lower compared to the rates four years ago.

The issue of "problem drinking" and its effects is a significant area to pursue using a more detailed analysis of the data collected in this study. According to certain reports college administrators perceive declines in the frequency of alcohol-related problems on campuses (Anderson & Gadaleto, 1984,1986). The 1992 data seem to support this shift through on overall drop in negative effects (by 3%) and by the increase in students choosing non-alcoholic alternatives. (Heck, 1989)

The 1992 replication of the originally 1988 study seemed to further validate many of the previous findings. It should be noted, that students appear to be acting more responsibly by drinking less than four years ago. A reduction occurred in the percentage of occurrence for almost every negative effect except for stealing and physical injury. Individuals are exhibiting fewer negative effects. The DUI estimation category also shows some decline. Fewer students are identified as heavy drinkers in 1992 than in 1989 (11.3% versus 19.5%). The CAGE once again exhibited its inadequacy for use as a screening instrument with college students. Because of the inability of the CAGE to identify problem drinking, there is a strong need to develop a screen device for problem drinking to be used in college counseling offices.

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